9th Tux Workshop on Quantum Gravity

February 14–18, 2022   –   Tux (Austria) and worldwide

Organizers: Christian Fleischhack and Jerzy Lewandowski

	Monday	Tuesday	Wednesday	Thursday	Friday
13:30	**Maciej Dunajski** Quasi–local mass, Kerr horizon, and causality	**Tomasz Pawłowski** Semiclassical states, high order quantum corrections and cosmology	**Marko Vojinovic** Coupling matter to spinfoam models using higher gauge theory	**Jakub Mielczarek** Towards the loop quantum gravity with compact phase space	**Gaoping Long** Coherent states and simplicity constraint in all dimensional loop quantum gravity
14:10	**Shupeng Song** Entropy of black holes with arbitrary shapes in loop quantum gravity	**Maciej Kowalczyk** Consequences of regularization ambiguities in Loop Quantum Cosmology	**Wolfgang Wieland** Flatness problem and selfdual variables	**Cong Zhang** Fermion coupling to loop quantum gravity: canonical formulation	**Deepak Vaid** Coherent States and Particle Scattering in Loop Quantum Gravity
14:50	Break				
15:10	**Eugenia Colafranceschi** Towards an information-theoretic characterizations of horizons in quantum gravity	**Guillermo A. Mena Marugán** An analytical investigation of pre-inflationary effects in the primordial power spectrum.	**Tijana Radenković** Topological invariant of 4-manifolds based on a 3-group	**Sepideh Bakhoda** The $U(1)^3$ model of Euclidean Quantum Gravity	**Grzegorz Czelusta** Quantum simulations of loop quantum gravity
15:50	**Asier Alonso-Bardaji** A quantum black hole effective model	**Rita Neves** States of Low Energy in Loop Quantum Cosmology	**Daniele Oriti** Cosmology from quantum gravity: basic ideas, relational observables and cosmological perturbations	**Ilkka Mäkinen** Scalar curvature operator for LQG on a cubical graph	**Andrzej Dragan** Quantum time dilation
16:30	**Alejandro García-Quismondo** Investigating an alternative to the Hamiltonian calculation of the Ashtekar-Olmedo-Singh BH model	**Lucía Menéndez-Pidal** Unitarity and clock dependence in quantum cosmology	**Alexander Jercher** Emergent Cosmology from Quantum Gravity in the Lorentzian Barrett-Crane Tensorial GFT Model	**Klaus Liegener** Semi-classical limit of Loop Quantum Gravity and the Quantum Speed Limit	**Anupam Mazumdar** Testing quantum aspects of gravity in a laboratory via entanglement
17:10	Break				
17:30	**Saeed Rastgoo** Polymer gravitational waves and its consequences: a model	**Igor Kanatchikov** Towards quantum teleparallel equivalent of general relativity	**Johannes Thürigen** Phase Transitions and Critical Dimension in GFT	**Anne-Cather. de la Hamette** Perspective-neutral approach to quantum frame covariance for general symmetry groups	**Charlie Beil** Aspects of the standard model from a new spacetime geometry
18:10	**Maciej Kolanowski** Gravitational radiation at (almost) isolated horizons		**Xiankai Pang** Phantom-like dark energy from quantum gravity	**Viktoria Kabel** Falling through masses in superposition: Quantum reference frames for indefinite metrics	**Jan Novak** Graviton as a phonon and dark energy problem
18:50	**Tomasz Trzesniewski** On the spectral dimensionality of quantum space(time)s		**Laurent Freidel** Local Holography: a new paradigm for quantum gravity		**Celeste Hogan** Quantum isotropy and the reduction of dynamics in Bianchi I